Sunshine Mining Company

Burgin Mine Project
P.O. BOX 130 PHONE: 801-433-6977
Eureka, Utah
84628

April 26, 1982

Mr. Thomas N. Tetting
State of Utah
Division of Oil, Gas and Mining
4241 State Office Building
Salt Lake City, Utah 84114

RE: Burgin Project
ACT/049/009
Utah County, Utah

Dear Mr. Tetting:

Enclosed is a copy of the memo on the planting of the test plots as proposed in our permit application. If you have any questions concerning this please feel free to contact me.

Yours truly,

Carl A Johnson

Carl A. Johnson
Project Manager

cc: Tom Portle
Susan Linner

Sunshine Mining Company

April 20, 1982

MEMO TO: B. Booth
FROM: C. Johnson

SUBJECT: Test Plots - Burgin Mine

On March 31, 1982, I met with Tom Portle and Susan Linner of Utah Division of Oil, Gas and Mining concerning the test plots as proposed in Sunshine's permit application. During the meeting, locations were chosen for the twelve test plots (see accompanying sketch).

On April 1, 1982, the four test plots on the acid waste rock were staked out and treated with lime. The only lime found to be available was Coal Mine Rock Dust. The Coal Mine Rock Dust (calcium carbonate, $CaCO_3$) is milled to 90% -200 mesh and has been approved for use in this project by the State Revegetation officials. Using a figure of 7 tons/acre of lime placement, it was calculated that 128 pounds was needed for 4 test plots. Since the Coal Mine Rock Dust is available in 50 pound bags, 150 pounds of lime was used on the 4 test plots. These treated test plots were allowed to sit until April 6, when they were seeded. During this time, the area received numerous spring showers and snow storms.

All 12 test plots were seeded on April 6, 1982, and are located as follows: Test Plots A, B, C and D on the acid waste rock; Test Plots E, F, G and H on the neutral waste rock and Test Plots I, J, K and L on the soil pile. All the seed, fertilizer, lime and mulch were hand spread. The seed and fertilizer were weighed on a postal scale.

Seed was applied at the rate of one ounce per test plot using the following calculations:

$$\frac{20 \text{ lb. PLS}}{\text{acre}} \times \frac{1 \text{ acre}}{43560 \text{ ft}^2} \times \frac{100 \text{ ft}^2}{\text{test plot}} \times \frac{66 \text{ lb. seed}}{50 \text{ lb. PLS}} \times \frac{16 \text{ oz.}}{\text{lb.}} =$$

0.97 oz/test plot or 1 ounce/test plot

Sunshine Mining Company

The fertilizer (diammonium phosphate 18-46-0) was applied at the rate of 6 ounces per test plot using the follow calculations:

$$\frac{150 \text{ lbs.}}{\text{acre}} \times \frac{1 \text{ acre}}{43560 \text{ ft}^2} \times \frac{100 \text{ ft}^2}{\text{test plot}} \times \frac{16 \text{ oz.}}{1 \text{ lb.}} = 5.51 \text{ oz/test plot or}$$

6 oz/test plot

The mulch used is Conweb Hydro Mulch Fiber. One bale was divided over the six test plots requiring the mulch.

The test plots were prepared as follows:

Acid Waste Rock

A. seed and lime
B. seed, lime and fertilizer
C. seed, lime and mulch
D. seed, lime, fertilizer and mulch

Neutral Waste Rock

E. seed only
F. seed and fertilizer
G. seed and mulch
H. seed, fertilizer and mulch

Soil Pile

I. seed only
J. seed and fertilizer
K. seed and mulch
L. seed, fertilizer and mulch

Carl A Johnson

Carl Johnson
Project Engineer

CJ/sml
Attachment

GENERAL ARRANGEMENT OF TEST PLOTS

(Not to Scale)